

DRG NO.

**OD-1-01-02-12**

DRAWN BY: **RS**

APPROVED BY:

TITLE:

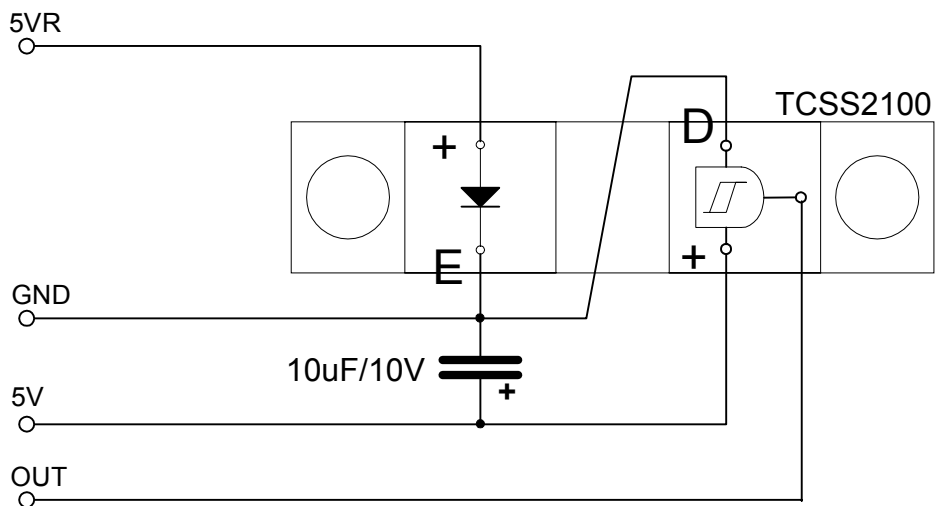
**XCALIBUR 2**  
**Goniometer - electrical diagram**

FILE: \\electronics\xcalicur\Electrical  
documentation v200\

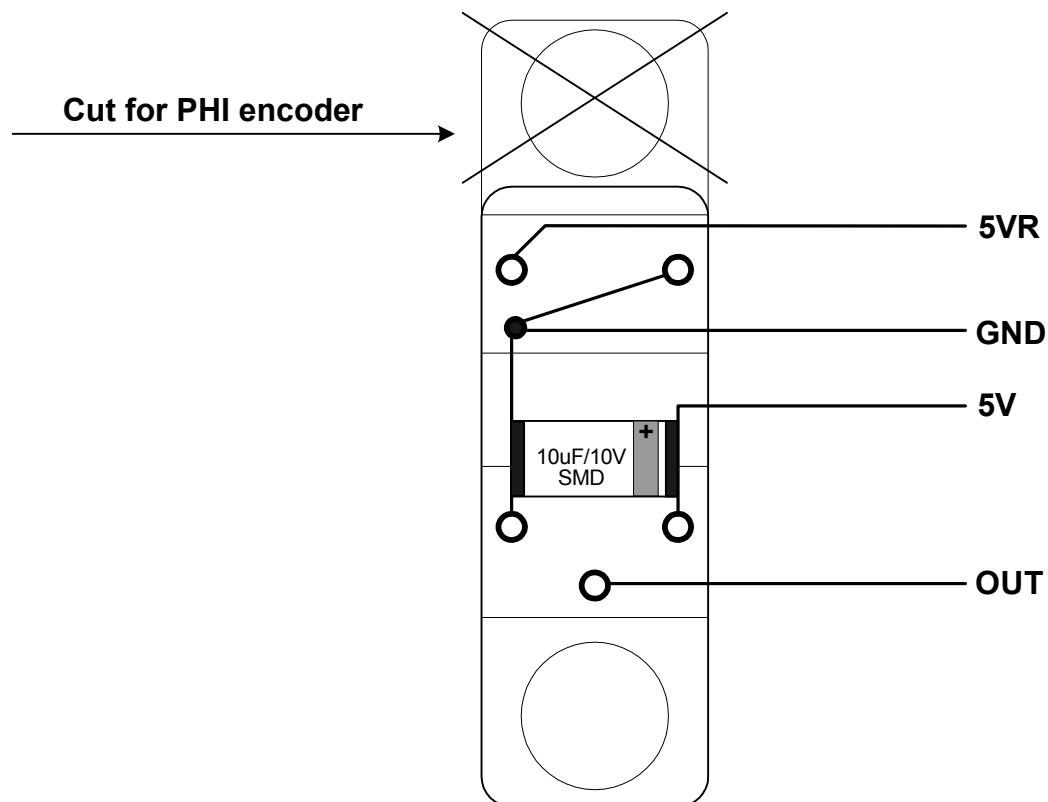
REV.  
**A**

DATE: **17/09/2001**


SHEET: 1 of 1

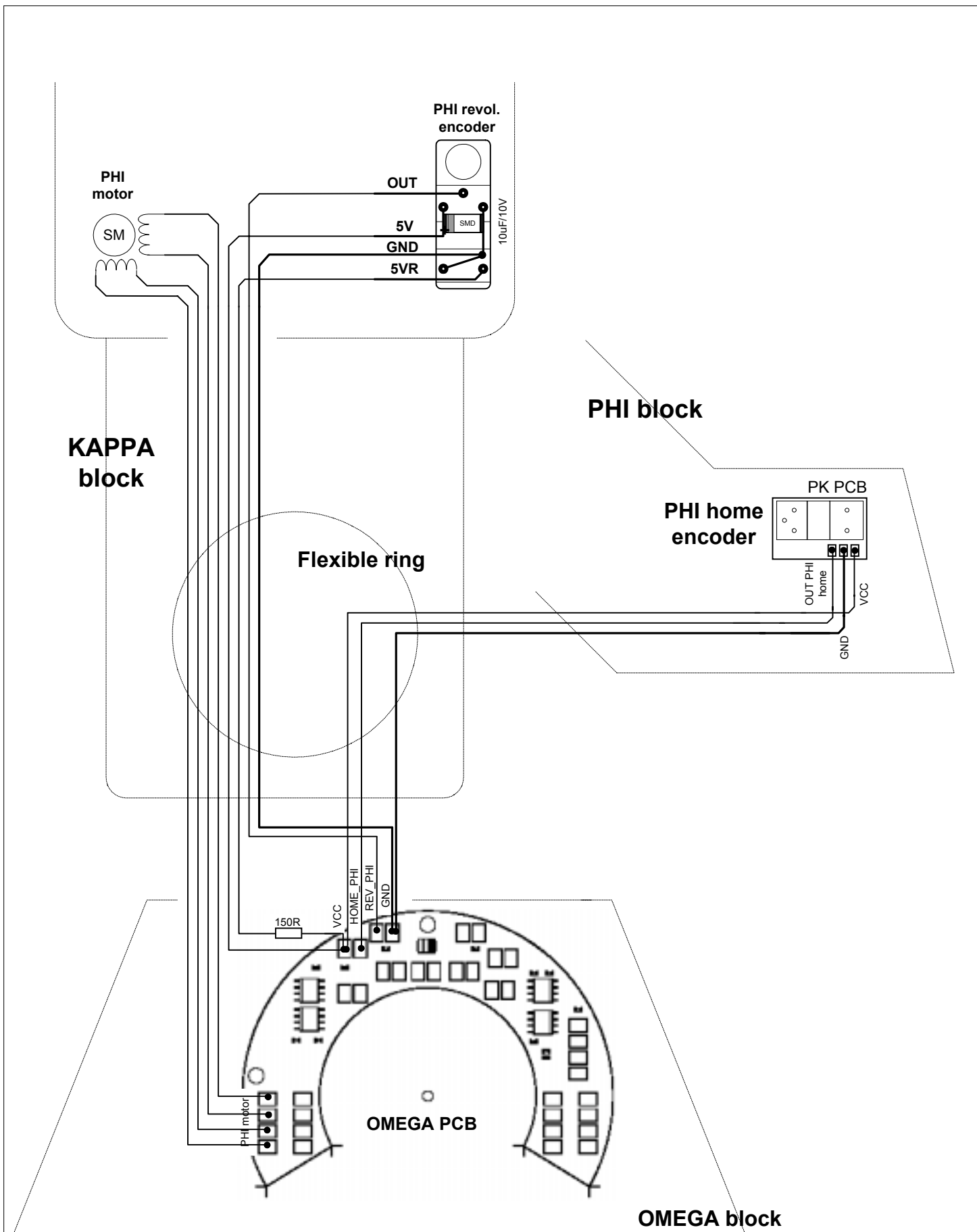



Capacitors 10uF/10V for Revol. encoders (KAPPA and PHI axis)



Connections view for Revol. encoders (KAPPA and PHI axis). Capacitor size: 3528.  
Encoder type : TCSS2100 - bottom view.

 <b>oxford diffraction</b> DRG NO. <b>OD-1-01-02-13</b>	TITLE: <b>XCALIBUR 2</b> <b>Goniometer - electrical diagram</b>	
	DRAWN BY: <b>RS</b> APPROVED BY:	FILE: \\electronics\xcalbum\Electrical documentation v200\ DATE: <b>04/12/2001</b> SHEET: 1 of 1



					 <b>oxford diffraction</b>	TITLE: <b>XCALIBUR 2</b>		
						PHI connections		
						FILE: \\KUMA\workgroups\electronics\g onio68332\cables		REV. <b>B</b>
						DATE: <b>17/09/2001</b>		SHEET: 1 of 1
<b>A. no.</b>	B				DRG NO. <b>OD-1-01-02-14</b>			
<b>Appr.</b>					DRAWN BY: <b>RS</b>			
<b>Date</b>	11/2002				APPROVED BY:			

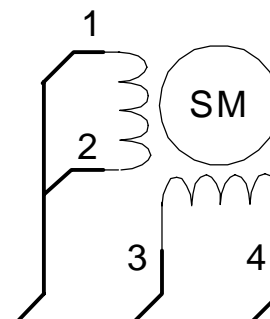
### Stepping motor connector :


# pin	name	description
1	motor 0 – phase A	phi
2	motor 0 – phase B	
3	motor 1 – phase A	kappa
4	motor 1 – phase B	
5	motor 2 – phase A	omega
6	motor 2 – phase B	
7	motor 3 – phase A	theta
8	motor 3 – phase B	
9	motor 4 – phase A	Detector
10	motor 4 – phase B	
11	-----	
12	GND	
13	GND	
14	motor 0 – phase -A	phi
15	motor 0 – phase -B	
16	motor 1 – phase -A	kappa
17	motor 1 – phase -B	
18	motor 2 – phase -A	omega
19	motor 2 – phase -B	
20	motor 3 – phase -A	theta
21	motor 3 – phase -B	
22	motor 4 – phase -A	Detector
23	motor 4 – phase -B	
24	GND	
25	GND	

### Stepping motor - Parallel connection:

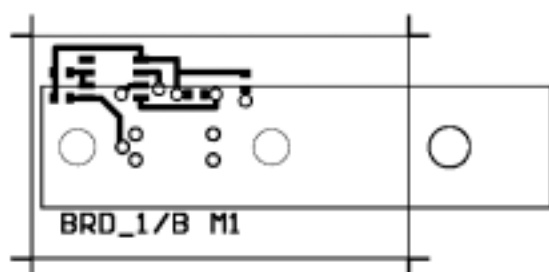
Phase A    1 - red + white/yellow  
               2 - yellow + white/red

Phase B    3 - black + white/orange  
               4 - orange + white/black

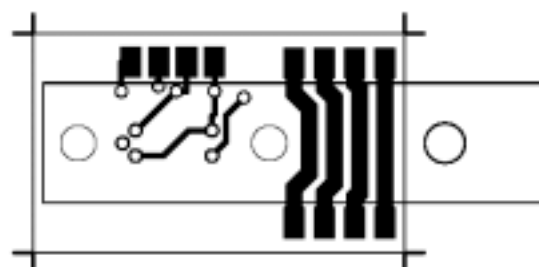


 <b>oxford diffraction</b>		TITLE: <b>Goniometer</b>	
DRG NO. <b>OD-1-01-02-20</b>		<b>Stepping motors connections</b>	
DRAWN BY: <b>RS</b>		FILE: Electronics\xcabibur\Electrical documentation v200\	REV. <b>B</b>
APPROVED BY:		DATE: <b>04/12/2001</b>	SHEET: 1 of 1

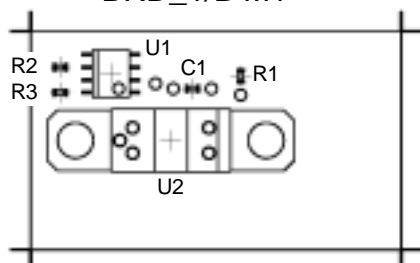
BRD\_1/B M1



BRD\_1/B M2



BRD\_1/B M1



U1 - MAX485CSA

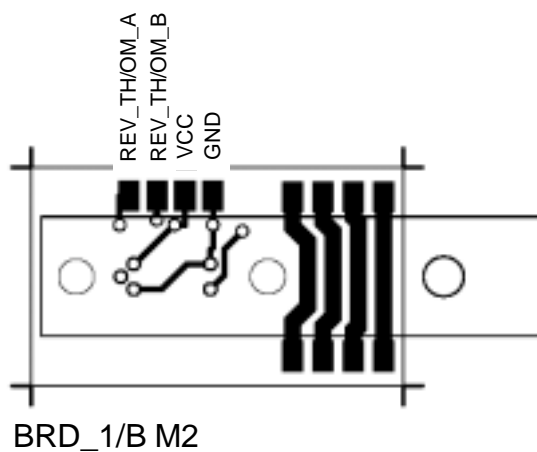
U2 - TCSS2100

R1 - 150R


R2 - 10k

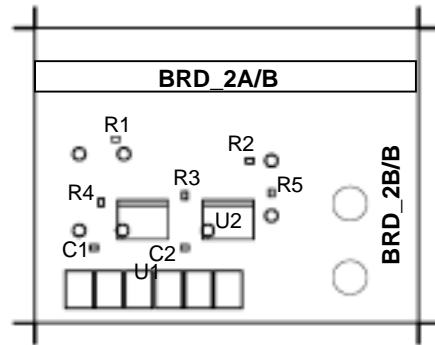
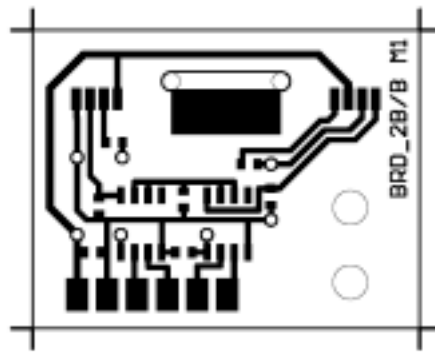
R3 - 1k

C1 - 100nF



BRD\_1/B M2

 <b>oxford diffraction</b>		TITLE: <b>OMEGA and THETA Printed Connector BRD_1/B</b>	
DRG NO. <b>OD-1-01-02-15</b>		FILE: \\electronics\calibur\Electrical documentation v200\	REV. <b>A</b>
DRAWN BY: <b>RS</b>		DATE: <b>17/09/2001</b>	SHEET: 1 of 1
APPROVED BY:			



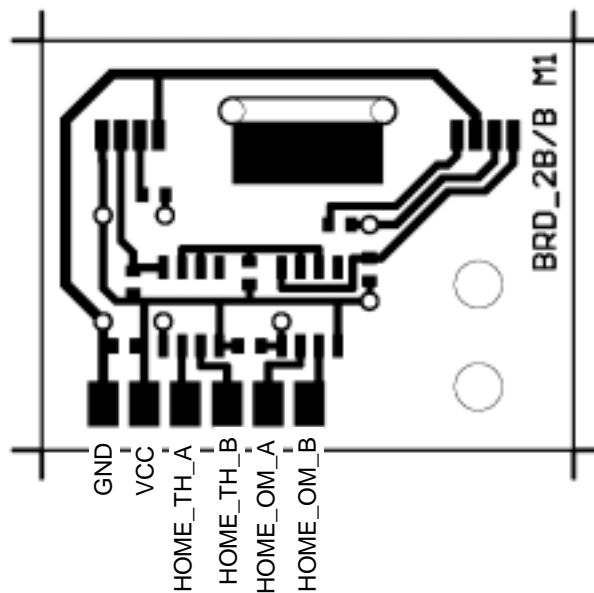
U1, U2 - MAX485CSA


R1, R2 - 150R

R3 - 10k

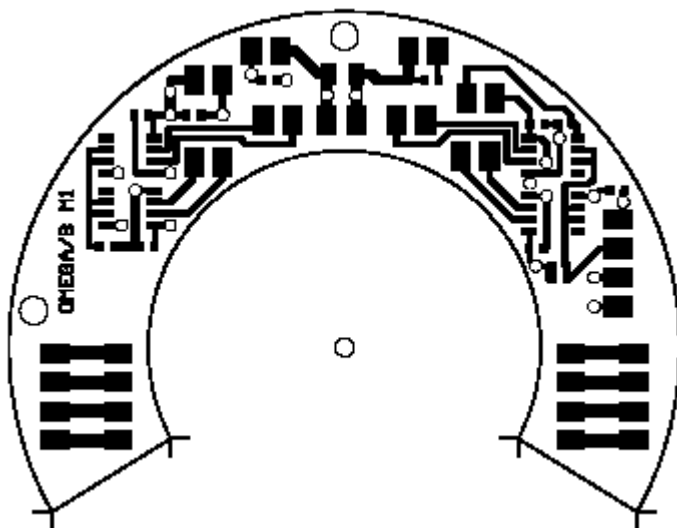
R4, R5 - 1k

C1, C2 - 100nF

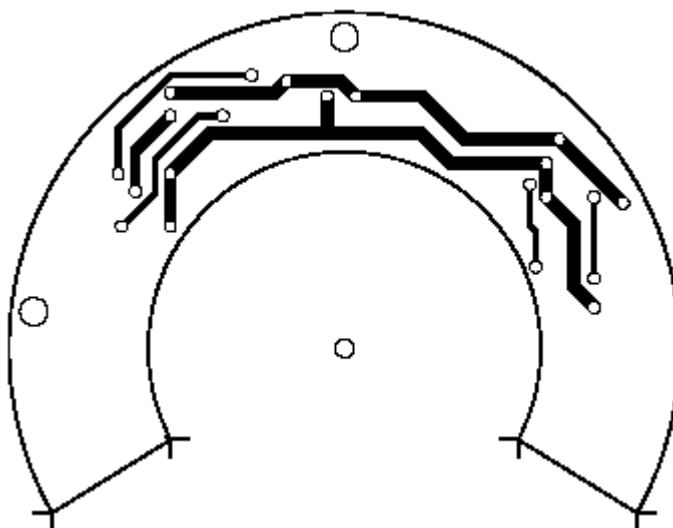


 <b>oxford diffraction</b>	<b>TITLE: OMEGA and THETA Home encoders BRD_2B/B</b>	
<b>DRG NO. OD-1-01-02-16</b>	<b>FILE:</b> \electronics\xcallibur\Electrical documentation v200\	<b>REV. A</b>
<b>DRAWN BY: RS</b>	<b>DATE: 17/09/2001</b>	
<b>APPROVED BY:</b>	<b>SHEET: 1 of 1</b>	

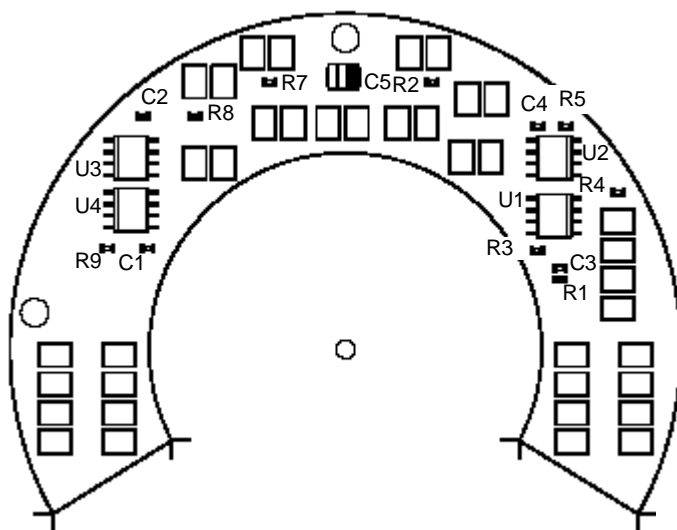
OMEGA/B M1



OMEGA/B M2



OMEGA/B M1



U1 U2 U3 U4 - MAX485CSA

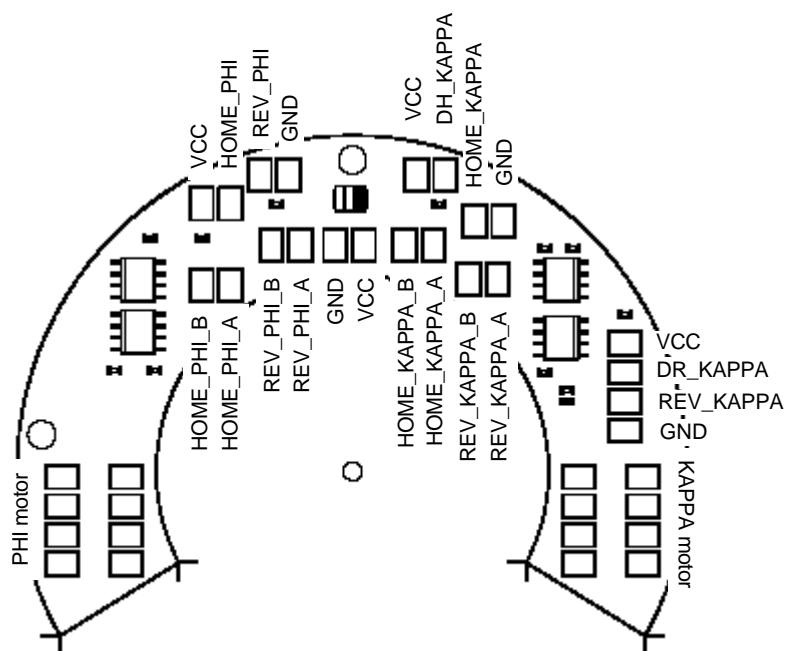
R1 R2 - 150R


R3 R9 - 10k

R4 R5 R7 R8 - 1k

C1 C2 C3 C4 - 100nF

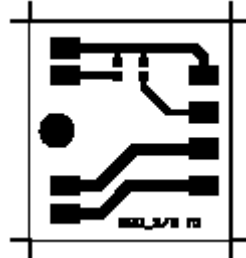
C5 - 10uF/10V



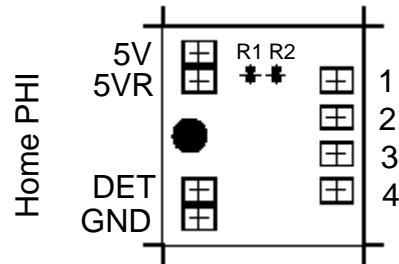
 <b>oxford diffraction</b>		TITLE: <b>OMEGA Printed Connector OMEGA/B</b>	
DRG NO. <b>OD-1-01-02-17</b>		FILE: \electronics\xcabibur\Electrical documentation v200\	REV. <b>A</b>
DRAWN BY: <b>RS</b>		DATE: <b>17/09/2001</b>	SHEET: 1 of 1
APPROVED BY:			



BRD\_3/B M1



BRD\_3/B M1




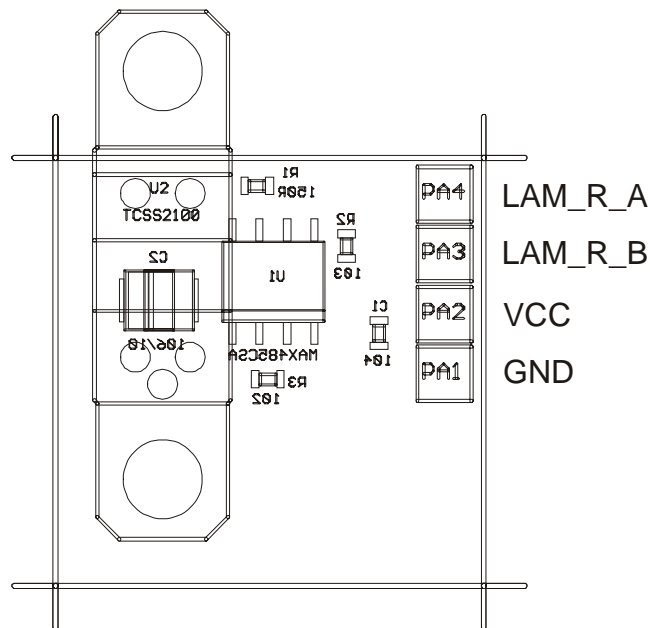
Home PHI

Rev. PHI and OMEGA  
Printed Connector

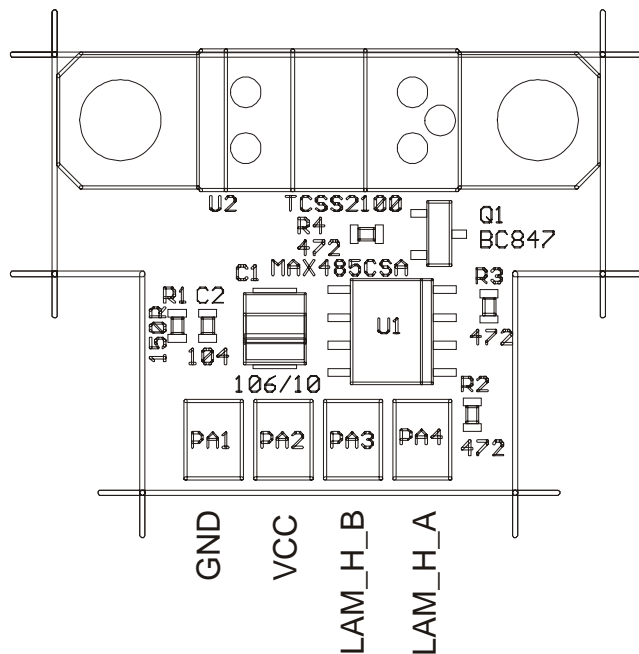
R1 - 150R

R2 - 150R


 <b>oxford diffraction</b>		<b>TITLE: PHI Printed Connector</b> <b>BRD_3/B</b>	
<b>DRG NO.</b> <b>OD-1-01-02-18</b>		<b>FILE:</b> \\electronics\calibur\Electrical documentation v200\	<b>REV.</b> <b>A</b>
<b>DRAWN BY:</b> RS		<b>DATE:</b> 17/09/2001	
<b>APPROVED BY:</b>		<b>SHEET:</b> 1 of 1	



CCD camera - encoder REV.



CCD camera - encoder HOME.

 <b>oxford diffraction</b>		TITLE: <b>CCD detector HOME and REV. encoders</b>	
DRG NO. <b>OD-1-01-02-19</b>		FILE: \electronics\calibur\Electrical documentation v200\	REV. <b>A</b>
DRAWN BY: <b>RS</b>		DATE: <b>17/09/2001</b>	SHEET: 1 of 1
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